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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 25

Application Number: 09/531,531
Filing Date: March 21, 2000
Appellant(s): SHIROTA ET AL.

Michael J.Schmidt
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 17, 2003.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

While there are no related appeals currently, appellants are pursuing claims similar to these in other pending applications, at least one of which is being handled by the current examiner (SN 09/816,384). For a complete listing, see the USPTO Palm Records for child applications owing their parentage to USP 5,755,107, the earliest application in this chain to have matured into a patent and to SN 08/531,383 filed September 21, 1995.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

Regarding Appellant's comments challenging the Examiner's allegations of pre-maturity in sending this case to Appeal, in Paper No. 23, on the basis of specific statutory law pertaining to the Appeal's process, it is the Examiner's understanding from MPEP Chapter 2000, interpreting Rule 56, that Appellant/Applicant is under a continuing obligation to keep the USPTO intelligently apprised of concurrent litigation and/or prosecution overseas. It is apparently a fact that such litigation(s), opposition proceeding(s) and/or prosecution(s) have been on going for some time. In the latest IDS

(Paper No. 22) received after the Notice of Appeal was filed (long after the conclusion of prosecution), a copy of, and translation of, a September 23, 2003 German Patent Office rejection was provided along with two new references. Appellants did not, however, provide the Examiner with a copy of the claims that the German Patent office was examining, effectively denying the USPTO all of the materials necessary to intelligently consider this prior art. This failing was pointedly conveyed to Appellants in Paper No. 23 along with the Examiner's conclusion that the apparent necessity of appeal after nearly a decade of prosecution in the USPTO (note the earliest application in this chain, SN 08/531,383, was filed September 21, 1995) was not understood. If relevant prior art were still being produced in Europe, an orderly and proper resolution of the issues here would militate against taking an appeal before a complete set of references was obtained. Introducing apparently relevant references on the eve of an appeal does not contribute to an orderly or proper prosecution/appeal. In that sense, this appeal is premature and Appellants' presentation of the relevant facts from the German proceeding not satisfactory.

(5) Summary of Invention

The summary of invention contained in the brief is deficient because it does not mention many of the features claimed in claims 6 and 40 (the only claims that the Board must consider) leaving both the Examiner and the Board to guess at what Appellant's are claiming. It is somewhat hypocritical for Appellants to criticize the Examiner's equivocation (Brief, on page 6, lines 14-20) about what prior art structure constitutes "a mode switching member for selectively switching flow direction of the conditioned air

blown into the passenger compartment" when Appellants have failed to even mention what structure in their own disclosure answers to this limitation.

Regarding the tubes and fins of the cooling heat exchanger, which are claimed but not mentioned in the summary, see Figures 7B, 8A, and 8B and the explanation thereof in the specification, which is incorporated here by reference here. Note that the orientation of the tubes parallel to the tilt of cooling heat exchanger is not claimed in claim 6 and 40. It is only with the tubes oriented in the direction of tilt that the improved drainage is possible along with the blower discharge direction also being in the tilt direction. The argument in the summary that there is an improved drainage (Brief, page 3, line 22 – page 4, line 2 and page 5, lines 11-13 and page 5, lines 16-18 and page 5, lines 20-21) is possible, with what is claimed in claims 6 and 40, is simply incommensurate with the scope of these claims. The improved drainage caused by the blower air flow and tubes being oriented in a direction parallel to the tilt direction of the cooling heat exchanger is not a relationship positively set forth in claims 6 and 40 and is therefore submitted to be of no moment.

Finally, it is unclear where, precisely, the "tilted upper end portion" and the "tilted lower end portion" of the cooling heat exchanger are and where the "top end" and "bottom end" of the air introduction port are, because Appellants have failed to discuss their location in reference to any of the forty seven drawing Figures in the application. Note however a June 25, 2001 drawing correction to Figure 2, which adds reference numerals 35 (upper end of air introduction port), 21n (downwardly inclined end of the cooling heat exchanger), 21p (lower side), 21o (upper side). However the nomenclature

and reference numerals do not precisely correspond to the terms used in the claims nor are bottom end of the air introduction port and the tilted upper end portion of said cooling heat exchanger identified, even if the language used to identify parts in amended Figure 2 is given its widest latitude in interpreting the claims.

In the absence of any guidance on how claim terminology should be construed, based on the lack of discussion of such in the summary section of the Brief, the Board is urged to adopt that relied upon by the Examiner in the rejections.

(6) Issues

The appellants' statement of the issues in the brief is substantially correct. The changes are as follows:

Issue 2 should read:

Whether claims 6, 7, 9-12, 15-20, 22, 23, and 40-42 are unpatentable over the prior art as applied to claim 6 [i.e. Issue 1] above and further in view of Nagao or JA 63-38016.

Issue 3 should read:

Whether claims 6, 7, 9-12, 15-20, 22, 23 and 40-42 are unpatentable over the prior art as applied to claim 6 [i.e. Issue I or Issue II] above and further in view of Gerbhardt or Marsteller or Brandecker or Bates or Mullin et al.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 6, 7, 9-12, 15-20, 22, and 23 (Group I) do not stand and fall together with claims 40-42 (Group II) and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

Within each of Groups I and II, however, all of the claims stand and fall together. Thus, to assess whether the rejections are proper it will only be necessary for the Board to separately consider independent claims 6 and 40.

Regarding the question of whether Appellants have stated a sufficient reason for why Group I and Group II should not stand and fall together the Board is referred to page 13, lines 1-7, lines 17-19 and page 14, lines 3-4 of the Brief. While the independent claims 6 and 40 of each of the aforementioned Groups are mentioned, there is no substantive argument or reasoning articulated by Appellants for their conclusion or any explanation of what the purported deficiencies of the rejections are relative to the two different Groups. Appellants however have distinguished the two Groups in their remarks and the Examiner chooses to let the Board consider any differences in claim 6 versus claim 40 on the merits of Appellants' remarks as identified above.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

JA 5-3365	-	1/1993
JA 6-156049	VALEO	6/1994
4,842,046	STECH	6/1989
JA 2-17388	DENSO	1/1990
JA 63-17107	MAZDA	1/1988
2,728,206	NEWTON et al.	12/1955
4,696,340	NAGAO et al.	9/1987
JA 63-38016	-	2/1988
2,703,223	GEBHARDT et al.	3/1955
3,492,833	MARSTELLER	2/1970
2,552,396	BRANDECKER	5/1951
1,909,144	BATES	5/1933
3,000,192	MULLIN et al.	9/1961

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 6, 7, 9-12, 15-20, 22 23, and 40-42 are rejected under 35 U.S.C. 103(a). This rejection is set forth in prior Office Action, Paper No. 19, pages 3-7.

Claims 6, 7, 9-12, 15-20, 22, 23 and 40-42 are rejected under 35 U.S.C. 103(a). This rejection is set forth in prior Office Action, Paper No. 19, page 8.

Claims 6, 7, 9-12, 15-20, 22, 23 and 40-42 are rejected under 35 U.S.C. 103(a). This rejection is set forth in prior Office Action, Paper No. 19, pages 8-9.

(11) Response to Argument

Regarding the argument that Appellants' arrangement of tubes promotes drainage, Appellants have studiously avoided claiming in either claims 6 or 40, that the tubes are oriented in the direction of the tilt of the cooling heat exchanger and that the discharge of air from the blower is parallel to the tubes. There is an important reason, in the Examiner's understanding, for why this specific orientation is not claimed and that is that Appellants are trying to obtain, with broad claims coverage, protection on the evaporator tubes oriented perpendicular to the flow direction of the blower and to the tilt direction (which coverage is believed to extend beyond the original disclosure). What Appellants seek here are claims 6 and 40 broad enough to cover both orientations. The improved drainage only occurs in the specific orientation disclosed by Appellants, but not being claimed in claims 6 or 40. The Board is urged to not consider it given that the argument is incommensurate with the scope of claims 6 and 40.

JP 5-3365

In the paragraph spanning pages 5 and 6 of the Brief, the argument is one that, in a practical sense, is submitted to be without adequate grounding in fact. It is submitted that Appellants are well aware of the conventionality in the industry of corrugated fin type evaporators and, that for cooling heat exchanger 6 of JP 5-3365, it would have been obvious to have used a corrugated fin type. In the final rejection (Paper No. 19, page 2, lines 4-11) the Examiner, when confronted by the same argument, defied Appellants to produce any evidence that the vast majority of modern automobile evaporators (upwards of 90%) are not corrugated

– fin types and, if Appellants could produce nothing, rightfully established this as a fact in this prosecution. Appellants produced no evidence whatsoever to contradict the Examiner's statement. It is submitted to be an entirely academic argument with no reasonable basis in fact. Nonetheless, in follow-up rejections, the Examiner had relied upon Nagao and JA 63-38016 to show corrugated-fin type evaporators with tubes are well known.

To show that a rectangle with an "X" in the middle such as shown in JP-5-3365 (at 6) or JP 6-156049 (at 28) is a tube and fin type heat exchanger, see JP 8-295128 (which forms no part of any rejection and is relied upon to show conventional knowledge in the field) which shows the classic rectangle with "X" in Figure 1 (element 3) and a detailed showing of the same evaporator in Figure 7 (element 3).

On page 6, lines 3-6, Appellants have given no explanation for their repeated failure to provide a complete translation. Clearly another partial translation provided for the first time with the Appeal Brief is too little, too late.

On page 6, lines 7-14, Appellants correctly state the Examiner's position and that is why this is a 35 USC 103 rejection and not a 35 USC 102 rejection. On page 7 of the final rejection (Paper No. 19) left figure at bottom, labelled Prior Art, the Examiner has drawn a dotted horizontal line across the Figure to show that the top of the air introduction port is at an elevation slightly below the lowest point on evaporator 6. Applying one of the four teaching references to lower the position of evaporator 6 to advantageously reduce the overall height of the

casing to permit it to fit into vehicles with less vertical space (e.g. passenger sedans as opposed to vans) would have been obvious. The "obvious" modification is illustrated on page 7 of the final rejection (Paper No. 19), bottom right Figure.

On page 6, lines 15-21, Appellants argue that the Examiner has purportedly provided no motivation for replacement of elements 13 of JA '365 with the mode control doors and distribution systems of JA '049, which latter system distributes air to the windshield at port 50, feet at port 54 and vent area of the passenger through port 60 and controls the relative proportions of distributed air using dampers 52, 56, and 62, respectively. This is erroneous. On page 5 of the final rejection (Paper No. 19), last paragraph, the Examiner clearly stated the motivation, to wit: "To have replaced elements 13 of JA '365 with the mode control doors of JA '049 to distribute air to vent, foot and defrost outlets to improve occupant comfort would have been obvious to one of ordinary skill" (emphasis supplied). The motivation is clearly one of occupant comfort and is unassailable. Literally every modern automobile has separately controlled vent, defrost and foot outlets, which significantly enhance occupant comfort by permitting selection by the passenger or automatic climate control computer of where the conditioned air should be discharged.

On page 6, line 22 – page 7, line 16, Appellants state hornbook law. The Examiner has complied with every requirement of that law.

On page 7, lines 17-19, and in regard to claim 40, both JP 5-3365 and JP 6-156049 show the entire bottom of the evaporator (6 and 28, respectively) open to flow from the fan. The flow of air is therefore necessarily along the entirety of the bottom surface of the evaporator in each reference. Appellants seem to not see this but have not explained in their Brief, in any cognizable manner, what they would want in terms of a "discussion" of the matter.

JA 6-156049

On page 7,lines 21-24, Appellants again attack JP 6-156049 as they did JP 5-3365 for not showing corrugated fin type evaporators. For the reasons articulated previously in regard to JP 5-3365, in a practical sense, the argument is submitted to not be grounded in fact. It is submitted that Appellants are well aware that corrugated fin type evaporators are an industry standard and the Examiner maintains their inclusion in the claims here is not a reason to find a patentable invention.

On page 8, lines 1-10 of the Brief, the Examiner doesn't understand Appellants' argument. In the Examiner's interpretation, the entire fan and housing including walls 23 and 24 is part of the claimed case forming an air passage through which air is blown into the passenger compartment along with the casing elements above evaporator 28. This interpretation is completely consistent with the limitations in claims 6 and 40. The claimed "lower space" is clearly shown between blower 30 and the bottom of evaporator 28, notwithstanding Appellants' remarks to the contrary. The top end of the air introduction port, as labelled by the Examiner on page 5 of the final rejection (Paper No.19), is clearly above (at a higher elevation as Appellant uses the term) than the

lowest point of the evaporator 28. The bottom end of the air introduction port is clearly positioned below (at a lower elevation, as Appellant uses the term) the top end of the air introduction port.

On page 8, lines 11-15, the argument that the Examiner has provided no motivation is erroneous. See final rejection (Paper No. 19, page 6, lines 7-12). The motivation is one of space reduction to permit the system to fit into smaller vehicles with less vertical space.

On page 8, lines 16-20 of the Brief the Examiner's comments above with regard to page 7, lines 17-19 of the Brief are incorporated here by reference. The entire evaporator is open at the bottom to airflow from the fan. Airflow necessarily occurs along the entire bottom surface of the evaporator.

JP 5-3365 (continued)

Inconsistently with their earlier arguments, Appellants now return on page 8, lines 21-page 9, line 10 of the Brief to argue the merits of the 35 U.S.C. 103 rejections. In the paragraph spanning pages 8-9 the Examiner's position is summarized correctly, however the notion that the evaporator 14 in JP 63-17107 is vertical is clearly erroneous. It is clearly shown tilted. In Appellant's own specification the approximately horizontal limitation has no defined limit. See Figure 7A of Appellant's specification where a large range of possibilities is disclosed. Furthermore, Appellant has found it is preferred to incline the evaporator between 10-30 degrees from the horizontal. See paragraph spanning pages 21-22 of the specification. JP '107 shows evaporator 14 inclined at an angle of about 45 degrees, which, according to Appellant's Figure 7A and

Figure 13, is an angle which Appellants have tested and gives acceptable performance. Regardless of the specific angle (which is not claimed in claim 6 or 40, or any other appealed claim), JP '107 clearly teaches the top end and bottom end of blower ports vertically disposed in the manner claimed and the upper end and lower end of the cooling heat exchanger disposed relative to the aforementioned parts of the blower port exactly as claimed.

The fact that JP '107 has no heater in the casing is irrelevant to what is cited to teach.

Appellants argue JP'107 is "not interested in reducing the height if the unit".

This is presumptive on Appellants' part, given that they do not work for Mazda the assignee of JP'107. Appellants do not know what the motivations were for the design in JP '107. Moreover the motivation need not be explicitly stated in the reference relied upon, In re Lintner, 173 USPQ 530 (CCPA 1972). The Examiner's motivation is based on practical first hand knowledge of automobiles and vans, which is submitted to be universally understood by those of ordinary skill in the art. For example, the distance between the floor and top of the dashboard of the Examiner's 1989 Honda Civic (sedan) is only 19 inches, while the same dimension in the Examiner's 1991 Toyota Previa (van) is 26 inches. Clearly motivation exists to reduce the vertical height of air conditioning/heater units to fit smaller vehicles notwithstanding Appellants' remarks to the contrary. The dashboard height in the example sedan is 37% less than the example van.

The Examiner has witnessed this attempted reduction of the level of one of ordinary skill in front of the Board of Appeals before and it can be very effective in taking advantage of the Board's understandable ignorance of all of the design constraints of all of the disparate arts with which it must deal on a daily basis. The Board nonetheless is required to evaluate obviousness at the level of one of ordinary skill in the art (which is submitted to be a very sophisticated post-college level mechanical art). It is absolutely unimaginable that one of ordinary skill in the art would not recognize that smaller vehicles have less vertical space under the dashboard than large vehicles such as SUV's or vans. That is the motivation, and if one decides the issue at the level of ordinary skill, the conclusion that it would have been obvious is submitted to be inescapable.

Regarding the repeated argument that Appellants' tilted core aids in drainage, it is again reiterated that Appellants are studiously avoiding claiming the features that produce this advantageous behavior, namely that the tube direction and blower airflow direction and evaporator tilt direction are all in the same direction. A tilted evaporator alone, all that is claimed in claims 6 and 40 (with no particular tube orientation or blower orientation relative to the tubes), is clearly disclosed in the prior art and any arguments relating to improved drainage are incommensurate with what is claimed in claims 6 and 40.

On page 9, line 11-page 10, line 10, Appellants quote more hornbook law.

On page 10, lines 11-16, Appellants state the Stech heat exchanger is approximately vertical. Nonetheless, it is tilted and the fan port is oriented as claimed

relative to the evaporator. The degree of tilt of the evaporator is submitted to be of no moment as to what the reference to stech was cited to teach (namely to position a tilted evaporator low in the casing to take up less room).

On page 10, lines 17-21 of the Brief, Appellants attack Denso assigned JP '388, which the Examiner discovered on his own, asserting that evaporator 100 is "more vertical than horizontal." This is not true. The evaporator angle is between 20 and 60, which significantly overlaps Appellants preferred range of 10-30. The overlap occurs from 20 to 30 degrees. Appellants are misstating facts to the Board. Again Appellants argument about drainage is incommensurate with what is claimed in claims 6 and 40.

On page 10, lines 22-page 11, line 2, Appellants' arguments with respect to Newton are unconvincing for the same reasons as articulated by the Examiner regarding Stech, JP'107 and JP'388.

On page 11, line 3 – page 12, line 23, and Appellant cite more hornbook law.

On page 12, line 24-30, the Examiner disagrees with every characterization and conclusion offered up by Appellants. The Examiner has had to struggle to keep Appellants from misstating facts and reducing the level of one of ordinary skill to unimaginably low levels.

On page 13, lines 1-2, Appellants argue that the Examiner has not discussed claim 40. All of the arguments with respect to claim 6 apply to claim 40 and Appellants haven't stated any reason, apart from those presented for claim 6, that claim 40 is not met by the 35 U.S.C. 103 rejections.

Regarding page 13, lines 3-7, every one of Gebhardt, Marsteller, Brandecker, Bates and Mullin show tubes oriented parallel to the air blow direction from the blower. Gebhardt and Brandecker are explicitly evaporators with this tube orientation relative to the blower. Multiple references to teach the notoriety of a feature are endorsed by In re Gorman, 18 USPQ2d 1885 (Fed. Cir. 1991) and In re GPAC, 35 USPQ2d 1116 (Fed. Cir. 1995).

Regarding page 13, lines 8-16, Nagao and JP '616 both teach conventional corrugated fin evaporators which is all they were cited for.

Regarding claims 13, lines 17-19, the references in question were cited to show what is discussed in the final rejection not for a heating heat exchanger above a cooling heat exchanger (which is clearly disclosed in JP 5-3365 and JP 6-1560490).

Post Script

This application has priority under 35 USC 119 and 35 USC 120 extending back to September 22, 1994, nearly a decade at this point. As late as November 5, 2003, Appellants were still sending in prior art from apparently ongoing overseas judicial proceedings. In the intervening years Appellants have cited much prior art from what the Examiner believes were opposition proceedings in Europe and/or Japan, the details of which have not been made of record in this application. By filing these series of post-allowance continuations, Appellants have avoided a reexamination/reissue of USP 5,755,107 and any intervening rights that might accrue to others. Appellants seek very broad claim protection, which, if allowed, will effectively dominate many subsequent patented designs that have been manufactured by others including designs with the

evaporator tubes positioned perpendicular to the flow direction of the tubes and various other fan to casing orientations.

Reversing the Examiner's sound rejections will indoubtly result in more litigation with what is undeservedly broad claim coverage.

The examiner requests the opportunity to present arguments at the oral hearing should there be one.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

John K. Ford
Primary Examiner

John Ford
March 9, 2004

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